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RESULTS OF THE 1989 REGIONAL  
FARM SURVEY FOR WISCONSIN

by

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# RESULTS OF THE 1989 REGIONAL FARM SURVEY FOR WISCONSIN

by

William E. Saupe and Janet Eisenhauer<sup>1/</sup>

This report summarizes data collected from a sample of Wisconsin farm families as part of a larger study conducted in the twelve North Central States. These states included Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, North Dakota, South Dakota, and Wisconsin. This survey was conducted through the cooperation of the University of Wisconsin-Madison and the Wisconsin Agricultural Statistics Service.

The purpose of the survey was to:

- a) identify what adjustments farm families made during the 1980's in response to the farm crisis,
- b) identify information and educational needs of farm families, and
- c) assess farm families opinions about several important agricultural and rural development issues.

## Methodology

In February, 1989, a statewide random sample of 1600 farm households was contacted. A packet of two questionnaires was sent--one for the farm operator and the other for the spouse (see Appendix). One questionnaire was answered only by the operator and the other questionnaire was answered only by the spouse. Response was encouraged by means of a follow-up reminder postcard and then by a brief telephone call.

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<sup>1/</sup> William E. Saupe is a professor and Janet Eisenhauer is a project assistant, Department of Agricultural Economics, University of Wisconsin-Madison. This research is in part a contribution to Regional Project NC-184 and was supported in part by the North Central Regional Center for Rural Development. Financial support was also received from the Research Division, College of Agricultural and Life Sciences, University of Wisconsin-Madison and the Cooperative Extension Service, University of Wisconsin-Madison. The assistance of the Wisconsin Agricultural Statistical Service is acknowledged with thanks. Errors remain the responsibility of the authors.

There were 622 operator surveys returned, for a response rate of 39 percent, while 525 spouse surveys were returned. Of all these responses, 492 were matched pairs of questionnaires for which both an operator and the spouse were present and both responded. The distribution of responses among Wisconsin counties is shown in the figure.

Nonresponse and Weighting The non-response rate for this survey was 61 percent. This high rate indicates the potential for nonresponse bias in the survey results, of two kinds.

In the first case, nonresponse results in what might be called "accidental stratified sampling". In this case, the distribution of survey respondents by selected characteristics is different than the distribution in the population by these same characteristics.<sup>2/</sup> The result is a stratified sample which may be weighted according to standard procedures so that the population proportions are reflected in the survey results. This weighting procedure is justified if theory suggests that an individual's characteristics affect their behaviour and opinions and thus their responses to survey questions. Weighting, in the case of accidental stratified sampling will almost always improve estimates, and will never make them worse.<sup>3/</sup>

In the second case, bias arises if nonrespondents would answer differently than respondents with similar characteristics. Unlike the case of accidental stratification described above, it is not possible to correct for this bias without some information from the nonrespondents. In order to gain this information, 25 randomly selected nonrespondents were interviewed by telephone and asked several questions from the mail survey. However, the majority of those called reaffirmed that they were not interested in participating in the survey at all, and those who did respond provided incomplete information. Because of this lack of information, this type of nonresponse bias could not be addressed.

The first type of nonresponse bias, accidental stratified sampling, was addressed as follows. Two characteristics of the farm population were chosen for comparison with the survey respondents because of their expected effect on the survey responses: age of farm operator and gross sales of farm products (a measure of farm size). Data for the farm population came from the 1987 Census of Agriculture. The distribution of the survey respondents

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<sup>2/</sup> For example, according to the 1987 Census of Agriculture, 31 percent of the population of Wisconsin farmers produced gross sales under \$10,000 in 1987, 49 percent produced between \$10,000 and \$ 99,999 and 20 percent produced \$ 100,000 or more. In our (unweighted) sample, however, the distribution among those three strata was 18, 55, and 27 percent, respectively.

<sup>3/</sup> Among the useful references on stratified sampling and related topics is Kish, Leslie Survey Sampling John Wiley & Sons, Inc., New York: 1965.

by age and gross sales of farm products was found to be different than the distribution for the farm population, indicating that our survey results were biased. The survey data were therefore adjusted (weighted) to reflect the distribution of the farm population by age of farm operator and gross sales of farm products.

The weighting matrix is reported in Appendix Table 1. Differences in the distributions of our unweighted and weighted observations for selected characteristics are shown in Appendix tables 2 and 3.

Missing Data Some respondents skipped parts or all of some questions in what were otherwise usable questionnaires. Rather than discard the observation and lose all the information, these missing items were accommodated by including a "no response" entry in the tables that follow in this report.

However, in 45 cases data were missing for the two variables that were needed to calculate the weights. Our options were to try to estimate these missing data, or to drop those observations and lose their information in all the analyses. "Age of operator" was not reported in eight cases. In six of these cases age was estimated by considering the observed relationships in the data set between the age of operator and the following related characteristics: age of the spouse, the age of children present in the household, the number of years the person had been a farm operator, and the number of years the operator had lived in the county. Age could not be estimated in the remaining two observations forcing us to drop them from the data set.

In 37 cases the respondents did not report their "gross farm sales". An accounting equation was developed based on the acres planted to various crops and the number and kinds of livestock and poultry produced. State average data on gross sales per acre and per unit of livestock were used to calculate gross sales. In 28 cases, adequate information was provided to complete the calculations. In nine cases the information provided was inadequate and those observations were also dropped from the data set.

In the remainder of this report we present descriptive tables reporting the responses to our questions, and discuss the major findings. Unless indicated otherwise, data are based on our weighted sample.

### Respondent Characteristics

The mean operator age for the sample (50.4 years) is essentially the same as that for the population as reported in the 1987 Census of Agriculture (50.3 years).<sup>4/</sup> About 17.3 percent of the farm operators and 11.3 percent of the spouses had not attended high school, while 25.9 percent and 34.6 percent, respectively, had formal post-high school education.

Total household income of farm families can come from many sources. Farm families can earn income (or generate net losses) from their farm business as well as from other, nonfarm self-employment. They may receive wages or salaries from off-farm employment; earn interest, dividends or rent from nonfarm investments; and receive transfers in the form of Social Security benefits, food stamps, annuities, etc. The sum of these are total household income.

We asked the farm operators in our sample to identify in which of nine income brackets their total household income fell in 1988. This was reported to be a net loss by 6.9 percent of the cases. Mean income can not be calculated from bracketed data, but about 50 percent of the Wisconsin respondents reported total household net income between \$10,000 and \$30,000 (see table 1).

Farm size can appropriately be measured in a variety of units. In specialized farms with the same enterprise the numbers of animals in the herd or acres of crops is a useful unit for comparing size (e.g. number of dairy cows, crop acres in corn and soybeans). Wisconsin agriculture is very diverse, so a scheme for comparing a wide variety of farm types is needed. Gross sales of farm products provides that kind of a measure, because it weights each unit of production that is sold by its selling price. Nearly one-third of Wisconsin farms reported gross sales of under \$10,000 (see table 2).

### Local Community Services, Economic Conditions, and Quality of Life

Farm operators were asked how various services, facilities and economic conditions in their local community had changed during the past five years. Their responses are reported in table 3 and are ranked in order of improvement.

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<sup>4/</sup> This is the expected result because one of the characteristics by which the sample was weighted to reflect the distribution of the population was age of the operator. The second characteristic was gross sales of farm products.

In general, more respondents felt that services and facilities in their local community had improved than felt they had gotten worse (eight of the first nine items in table 3). The exception was "job opportunities", where nearly 30 percent thought the situation had gotten worse, and about 27 percent thought it had gotten better.

The farm and farm related financial conditions in the community were a different story, however (final four items in table 3). About one farm operator in six reported that their own farm's financial condition had improved, twice that many felt their's had gotten worse, while about half said it was unchanged. In contrast, three-fourths felt that other farmers in their area had become worse off during the last five years. That is, individual farmers viewed themselves as doing considerably better than the other farmers in their community.

Respondents viewed the change in the financial conditions of their lenders as somewhat similar to their own, but felt agribusiness firms in the area had fared quite badly in the past five years.

Operators and spouses were asked on their separate questionnaires for their opinion abouts various aspects of quality of life in their community. It should be noted that these are not matched operators and spouses, but instead are the responses of all the operators that elected to answer these questions (maximum number is 622) and all the spouses that elected to answer (maximum number 525).

The operators and spouses gave similar responses regarding family finances during the past five years. The responses of both the operators and the spouses were about evenly distributed among "becoming better", "remaining the same", and "becoming worse". Regarding changes in the quality of life, a larger proportion of both operator and spouse said it had "remained the same", and fewer thought it had "become worse" in the last five years (table 4).

Looking to the future, 80 percent of the operators thought the overall economic condition of farmers in the next five years would become worse, while 20 percent thought it would be better. The majority of the spouses (58 percent) also thought overall conditions for farmers would become worse, but fewer spouses than operators thought conditions would become better. Considering their own farm's overall financial situation, one-fourth of both operators and spouses thought that the likelihood that they would continue to farm for at least the next five years had become worse. More operators than spouses thought the likelihood had become better. But comparing their financial situation to other farmers in the area, more of both the operators and the spouses thought that they had become better than thought they had become worse. Relatively few operators or spouses felt that their satisfaction with farming had gotten better in the last five years. The majority reproted no change in various aspects of "neighboring" in the last five years.

### Adjustment Made Because of Financial Need

Adjustments made by the farm family in response to financial need in the past five years are reported in table 5, ranked by the frequency with which they were reported by farm operators. Over half reported postponing major household purchases, using savings to meet living expenses, and cutting back on charitable contributions. Additional high frequency consumer responses included changing food shopping or eating habits, changed transportation pattern, and reducing household utility use.

Reductions in human capital investments and care, which could have longer term negative effects on future earnings and care costs, were noted as follows: postponed medical or dental care (38 percent), decreased savings for childrens' education (32 percent), cancelled or reduced medical insurance coverage (23 percent), let life insurance lapse (14 percent), and postponed childrens' education (8 percent).

Forty-one percent of the operators reported that their spouse had taken off-farm employment, and 36 percent reported that they had themselves begun work off the farm. The intensity of off-farm employment is reported in table 6 for operators and spouses.

Probably related to this increased incidence of off-farm employment is a reductions in on-farm work reported by 37 percent of the operators and for 21 percent of other family members (table 7). Increases in operator or family labor on the farm was reported in about 15 percent of the cases.

### Risk Reduction Behaviors

The decades of the 70s and 80s were periods of wider than usual fluctuations in many farm commodity prices, interest rates, credit terms, and in land values. Farmers may well perceive the farming environment as riskier now than in the past. We asked farm operators to indicate adjustments they had made in the last five years to respond to risk, and their responses are reported in table 8 ranked by most frequent responses. Changes planned by 1992 are also reported.

From about half to three-fourths of the farm operators reported postponing major farm purchases, paying closer attention to marketing, keeping more complete financial records, reducing long and short term debt, and sharing labor and machinery with neighbors. From one-third to one-half reported that they would make those changes in the next four years, i.e. by 1992.

About one-fifth each reported renting more land and renting less land, and about one-tenth each reported buying more land and selling some land.



### Participation and Satisfaction With Government Programs

A variety of Federal and State government programs are available that might be of assistance to farm households. We inquired about participation in 16 of them, and the amount of help received from those that had been used. The programs are ranked in table 9 by the percentage of operators that reported that the program had been "A Lot of Help" to them.

Over two-thirds of the farmers participated in the 1988 Drought Assistance Act and in some Federal farm commodity program(s), and most reported that they had been helped by them. One-fourth to one-fifth used loans from the Farmers Home Administration (FmHA), had removed cropland from production under the long term Conservation Reserve Program, or had taken out Federal All-Risk Crop Insurance. The two bankruptcy options were the least-used programs.

Most of the programs had high visibility among the farmers interviewed with less than one percent not participating because they "Did Not Know About" drought assistance, FmHA, the bankruptcy options, or food stamps. Least well known were the federal crop insurance program, the availability of off-farm job search and assistance programs, and financial analysis or counseling performed by the Extension Service. The most common reason cited for not participating in these programs was that the program was not needed.

The appropriate reporting that a program was "No Help" may have been misunderstood or misused by some respondents. A few respondents reported that they had participated in all 16 programs and that each was of "No Help". While this may be an accurate statement of their experiences, there is the possibility that it instead reflects their use of the question to express general disapproval of government programs. For example, unemployment benefits, fuel assistance, income assistance, and food stamps provide direct cash assistance to a participants. While they might have been only "Some Help" to a recipient, it is unlikely that such grants would have been of "No Help". In addition, it would have been extremely unlikely that a farmer would be involved in both types of bankruptcy processes. We conjecture that the percentages reported in the "No Help" column may be overstated by perhaps two percentage points.

### Farm Information and Training Needs

Farm operators opinions regarding the training and information they will need in order to continue farming can be an important input in the planning done by educational institutions with responsibilities for meeting those needs. Farmers' perspectives should be of use to the Extension service and other adult vocational training programs in their immediate and long-term program planning for farmers. For future farming entrants in the longer term, these ideas may be helpful in developing the farm training curriculums of high school agricultural programs, college-level short courses for beginning farmers, and in college programs directed at preparation for farming.

In table 10, farmers' responses are ordered based on the percentage of respondents reporting that the topic was a "Very High Need" for them to be able to continue farming.

More than half the farmers surveyed reported that they would need information or training in four areas directly related to the production of currently produced crops. These four areas are: a) reducing production costs through low-input farming methods, b) using new technologies as they become available, c) using appropriate conservation techniques, and d) using new machines and chemical inputs to increase production.

In addition, more than half the farmers recognized the importance of improving their marketing skills, and diversifying the farm operation by adopting new crops and livestock. In contrast to the response to training in the above areas, about a fourth of the farmers felt the need for training in processing farm products on the farm.

#### Farm Responsibilities and Effort by Farm Spouses

The farm spouses, almost all of whom were female, were asked about the kinds of work they did and if the time devoted to these tasks had changed during the last five years. Spouses, like farm operators, can contribute to household well-being by allocating their effort across activities. In general, it appears that most spouses are involved in home production (home-making) and in the book keeping and record keeping aspects of the farm business. Approximately 40 percent of the spouses worked off the farm, while fewer than that were directly involved in farm production (see table 11).

The common perception of the male-female division of labor in the farm household prevailed. About 96 percent of the spouses reported that they performed household tasks and/or child care, with 86 percent reporting that they "Always" did so, and a fifth reporting that their time on these efforts had increased in recent years. Some 85 percent reported that they took care of a vegetable garden or animals for family consumption, another traditional role for the "farm wife". A fifth, however, reported that they were doing less of this.

Regarding the farm business, 84 percent of the spouses did bookkeeping or maintained farm records, and over 90 percent ran farm errands. Nearly three-fourths were involved in production agriculture by milking cows or otherwise caring for farm animals or doing field work. However, these were the areas of greatest change in the last five years, with about one-third of the spouses reporting less time in these duties than in the past.

The greatest increase in time devoted to a particular activity was in spouses working at an off-farm job, which is consistent with results from other studies. Over two-thirds worked off-farm at least some time during the year, and 27 percent reported that their time in off-farm work had increased in the last five years.

In contrast, less than 20 percent of the spouses reported that they regularly purchased major farm supplies and equipment, did field work, supervised the farm work of others, or marketed farm products, but about half had purchased major farm supplies and equipment or supervised the farm work of others at some time. Less than 30 percent of farm spouses had ever marketed farm products through wholesale buyers or directly to consumers. Most spouses reported that the amount of time spent on various tasks had remained unchanged in recent years, and that was particularly true with regard to these four activities.

#### Farm Spouses' Views of Family Decision-Making

Operators and spouses are most likely to make joint decisions regarding the purchase of major household appliances, buying or selling land, and buying major farm equipment. It appears, however, that spouses are less involved in other production decisions. More than 40 percent of the surveyed spouses reported that their husband (or someone else) was the sole actor in decisions to produce a crop or livestock, when to sell agricultural products, or to try a new agricultural practice. Very few spouses (six percent or less) made any of these decisions on their own. Spouses' greatest independence in family decision-making was in buying major household appliances, where about 15 percent made those decisions by themselves (see table 12).

#### Frequency of Life Pressures on Farm Spouses

There are many pressures on farm families. We asked the farm spouses how frequently they experienced certain kinds of pressures. These are reported in table 13, ranked by their occurrence on a daily basis.

The most common, mentioned by almost 80 percent of the spouses, was problems in balancing work and family responsibilities at least "Occasionally", and with one-fourth experiencing this pressure on a daily basis. Lacking control over weather and prices was also frequently experienced with 79 percent reporting this type at least "Occasionally", and with one-fifth reporting it on a daily basis.

The two stresses most rarely experienced by farm spouses were insufficient support from spouse in farm or family duties, and difficulty in child care arrangements, with about one-third of the spouses for whom this was applicable reporting occasional or more frequent stress from these areas. Child care arrangements were inapplicable to the situation for about half of all households, i.e. there were no children present.

#### Coping Strategies Used by Farm Spouses

We asked the farm spouses how often they used each item on a list of 18 coping strategies to handle the life pressures reported above (table 14). Five of the six most used strategies suggest an image of stoic optimism on

the part of these farm spouses. Coping strategies most commonly used by farm spouse included "remind myself that for everything bad about farming, there is also something good", and "notice people who have more difficulties in life than I do". More than 50 percent of the surveyed spouses reported using these two coping strategies either "a great deal" or "quite a bit". Nearly half of the spouses used the following four with that same level of frequency: a) "participate in church activities", b) "put up with a lot as long as I make a living from farming", c) "tell myself that farming is not the only important thing in life", and d) "make a plan of action and follow it". Note that only the latter suggests an active, take control approach to stress management.

The least commonly used coping strategies also appear to confirm the stoically optimistic response, as strategies that seek outside assistance or otherwise involve taking action are used less frequently. More than 90 percent of the spouses reported that they never used a "family counselor or other mental health professional" and about half never "sought support from a minister or priest" or "talked to someone who can do something concrete about the problem". About a third at least some times "try to make myself feel better by eating, drinking, smoking, using medication, etc.". It seems, then, that farm spouses prefer to keep their problems to themselves.

#### Membership in Farm and Community Organizations

Farm and community organizations provide opportunities for joint action to improve negotiating position for pricing farm inputs and products, influencing public policy, and addressing other rural conditions and issues. Farm operators and spouses in our survey were very similar in their participation as members in a variety of such organizations, but lack of participation (as members) was the more common response.

Most farm spouses have never been members of the nine types of organizations about which we inquired, ranging from 60 percent for national farm policy organizations, to over 95 percent for women's branches of commodity organizations, women's farm organizations, and farm political action groups (see table 15).

The result for farm operators was similar with the exception of memberships in a) farm supply cooperatives, and b) any organization such as National Farmers Organizations, Grange, Farm Bureau, National Farmers Union, Young Farmers and Farm Wives. Approximately 40 percent of the operators reported that they are currently members of these types of organizations, and about one-fourth belonged to farm marketing cooperatives or to farm commodity organizations.

**NORTH CENTRAL REGION  
FARM FAMILY WELL BEING SURVEY  
WISCONSIN SAMPLE**

Upper Number = Farm Operators  
 Lower Number = Farm Spouses  
 State Total: 622 Operators  
 525 Spouses

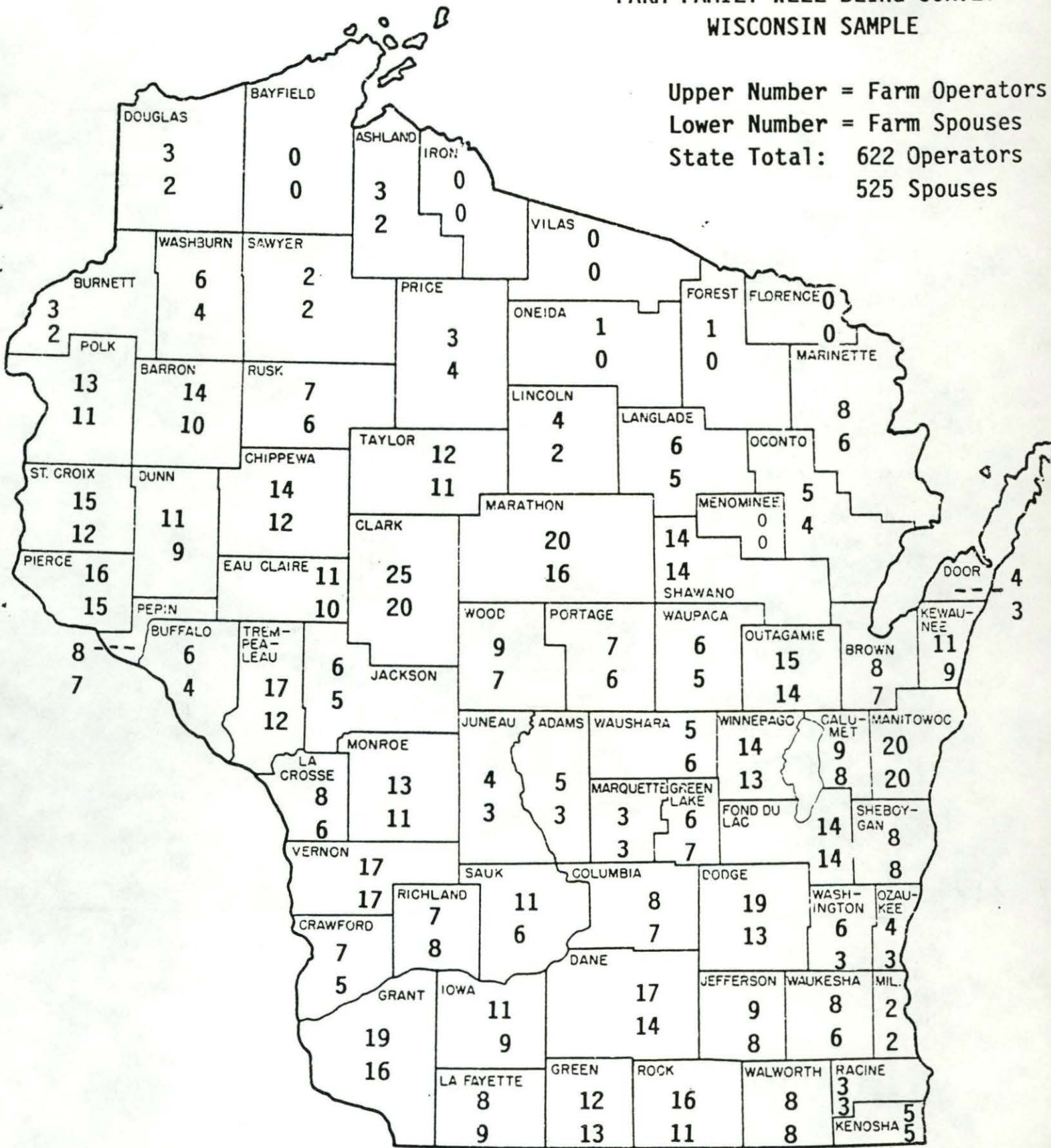


Table 1. Comparison of Respondents' Personal Characteristics to Personal Characteristics of Total Farm Population in Wisconsin

	<u>Sample of Operators</u>	<u>Sample of Spouses</u>	<u>Wisconsin Farm Operators Population</u> <sup>a/</sup>
<b>Personal Characteristics</b>			
Average Age (Years)	50.4	48.4	50.3
	-----Percent-----		
Under 25	0.4	3.3	1.7
25-34 years	15.2	15.4	13.9
35-44 years	21.5	21.2	21.6
45-54 years	22.0	26.9	22.0
55-64 years	24.0	23.9	23.9
65+ years	<u>16.9</u>	<u>9.3</u>	<u>16.9</u>
	100%	100%	100%
Average Years of Education	12.0	12.5	NA
	-----Percent-----		
0-8 years	17.3	11.3	NA
9-12 years	56.8	54.1	NA
13-16 years	21.3	31.0	NA
17+ years	<u>4.6</u>	<u>3.6</u>	NA
	100%	100%	
Net Family Income From All Sources		NA	NA
	-----Percent-----		
Loss	6.9	NA	NA
\$1--\$9,999	22.7	NA	NA
\$10,000--19,999	24.5	NA	NA
\$20,000--\$29,999	19.4	NA	NA
\$30,000--\$39,999	10.9	NA	NA
\$40,000--\$49,999	7.7	NA	NA
\$50,000--\$59,999	3.7	NA	NA
\$60,000--\$69,999	1.7	NA	NA
Over \$70,000	<u>2.5</u>	NA	NA
	100%		

<sup>a/</sup> 1987 Census of Agriculture; Volume 1 Geographic Area Series; Part 49 Wisconsin State and County Data.

NA - Not Available.

Table 2. Comparison of Respondents' Farm Characteristics to Farm Characteristics of Total Farm Population in Wisconsin

	Sample of Operators	Wisconsin Farm Operators Population <sup>a/</sup>
Average Size Farm (Acres)	208	221
	-----Percent-----	
1-9 acres	6.1	5.3
10-49 acres	4.9	11.7
50-179 acres	43.2	36.6
180-499 acres	41.2	38.4
500-999 acres	4.4	6.5
1,000+ acres	<u>0.2</u>	<u>1.5</u>
	100%	100%
<hr/>		
Gross Farm Sales		
	-----Percent-----	
Less than \$10,000	31.1	31.1
\$10,000-99,999	48.5	48.5
\$100,000 or more	<u>20.4</u>	<u>20.4</u>
	100%	100%

<sup>a/</sup> 1987 Census of Agriculture; Volume 1 Geographic Area Series; Part 49 Wisconsin State and County Data.

Weighted responses (see text).

Table 3. Farm operators' opinions on local services, facilities, and economic conditions

"How have the following services, facilities and economic conditions changed in your community over the past five years? Would you say they have generally 'improved,' 'remained the same', or 'gotten worse'?"

	Percent				Number of Respondents
	<u>Improved</u>	<u>Remained the same</u>	<u>Gotten Worse</u>	<u>Uncertain</u>	
Shopping facilities	47.5	32.2	18.8	0.7	596
Adult education opportunities	32.9	55.6	4.2	6.4	599
Health care services	27.5	50.7	14.6	6.3	599
Banking services	27.0	57.8	13.4	1.5	601
Job opportunities	26.4	38.3	29.9	4.6	603
Quality of schools	25.6	54.0	15.4	4.6	604
Police and fire protection	25.0	68.1	4.5	2.2	602
Child care facilities	23.4	44.9	7.8	17.9	590
Opportunities for entertainment and recreation	19.9	57.5	17.8	3.5	594
Your farm's financial condition has	17.7	45.3	34.7	2.1	601
The current financial condition of lenders in your area has	7.5	51.9	25.3	13.7	597
The current financial condition of agribusiness firms in your area has	5.5	26.8	59.8	6.7	603
The current financial condition of farmers has	4.2	17.6	76.5	1.1	605



Table 4. Farm operator and spouse opinions on quality of life in their community

"Please circle the response that comes closest to your opinion about the quality of life in your community."

	Become Better		Remained The Same		Become Worse		Total	
	Op	Sp	Op	Sp	Op	Sp	Op	Sp
	-----Percent-----						Number	
During the past five years, <u>your</u> family finances have	37.6	40.4	29.1	26.7	33.3	32.8	608	479
During the past five years, the quality of life for <u>your</u> family has	30.9	37.2	45.7	42.1	23.4	20.7	606	480
In the next five years the overall economic condition of farmers will	20.0	13.3	0.0	28.1	80.0	58.7	587	472
Considering your farm's overall financial situation, the likelihood that you will continue to farm for at least the next five years has	20.1	13.8	54.8	61.8	25.0	24.3	591	471
Compared to farmers in your area, your financial situation has	31.2	28.4	51.4	54.6	17.4	17.1	597	472
All things considered, your satisfaction with farming has	16.9	13.4	44.7	48.2	38.5	38.4	599	475
Has "neighboring" over the past five years	12.8	12.8	57.0	58.3	30.2	28.9	600	480
Has neighbors helping each other over the past five years	16.8	15.4	52.9	56.6	30.2	28.0	606	478
Do you believe the things you have in common with people in your community has	14.1	14.1	71.5	68.1	14.4	17.8	606	477

Table 5. Farm family adjustments reported by operator as made in 1985-1989 because of financial need

"Has your family made any of the following adjustments because of financial need in the past five years?"

	<u>Yes</u>	<u>No</u>	<u>Number of</u>
	- Percent -		<u>Respondents</u>
Postponed major household purchase(s)	59.4	40.6	606
Used savings to meet living expenses	51.9	48.1	605
Cut back on charitable contributions	50.0	50.0	601
Changed food shopping or eating habits to save money	45.1	54.9	606
Spouse has taken off-farm employment	41.4	58.6	603
Changed transportation patterns to save money	38.6	61.4	602
Postponed medical or dental care to save money	37.6	62.4	606
Reduced household utility use, such as electricity, telephone	37.6	62.4	604
You have taken off-farm employment	36.2	63.8	606
Decreased money saved for children's education	32.1	67.9	598
Purchased more items on credit	28.3	71.7	604
Sold possessions or cashed in insurance	27.0	73.0	605
Fallen behind in paying bills	25.8	74.2	603
Cancelled or reduced medical insurance coverage	22.9	77.1	602
Borrowed money from relative or friends	19.7	80.3	605
Let life insurance lapse	14.3	85.7	601
Children have postponed education	8.1	91.9	599

Table 6. Off-farm employment of operators and spouses in 1988

	Operator		Spouse	
	Number	Percent	Number	Percent
None	374	61.2	352	57.7
1--9 Hours Per Week	15	2.5	16	2.6
10--19 Hours Per Week	20	3.3	21	3.5
20--29 Hours Per Week	17	2.8	50	8.1
30--39 Hours Per Week	15	2.4	38	6.3
40+ Hours Per Week	170	27.8	133	21.8
Respondents	611	100.0	611	100.0
Average		14.1 hours		13.8 hours

Table 7. Percentage changes in farm operation from 1984 to 1988 reported by farm operators

	Acres Owned	Net Acres Rented	Total Acres Operated	Operator Hours Worked on Farm	Percent Family Labor on Farm
Increase	8.7	20.5	26.9	13.6	19.7
Decrease	16.6	22.4	21.6	37.4	15.8
No Change	74.7	57.2	51.5	49.0	64.5
	100%	100%	100%	100%	100%

Table 8. Farm operator's report of risk reduction behaviors for 1984-1988 and behaviors planned for 1989-1983

"Many farmers believe that the risk in farming has increased during the last five years. Please indicate if you have made any of the following adjustments."

	Changes Made 1984-1988		Changes Planned -1992		
	<u>Yes</u>	<u>Number of</u>	<u>Yes</u>	<u>Maybe</u>	<u>Number of</u>
	- Percent -	<u>Respondents</u>	- Percent -	-	<u>Respondents</u>
Postponed major farm purchase	74.1	588	48.8	19.2	545
Paid closer attention to marketing	71.9	583	61.3	11.8	544
Kept more complete financial records	64.9	582	55.0	6.7	547
Reduced long-term debt	60.8	576	50.0	11.7	545
Reduced short-term debt	58.3	572	48.1	11.9	542
Shared labor or machinery with neighbors	50.0	586	34.5	14.7	550
Reduced expenditures for hired help	38.1	586	25.7	9.6	548
Diversified farm by raising livestock	38.1	575	24.2	18.3	538
Sought off-farm employment	38.1	581	26.4	10.7	554
Bought crop insurance	30.2	582	33.0	17.8	548
Diversified farm by adding new crops	23.5	590	16.9	36.9	557
Rented fewer acres	21.7	584	17.3	9.5	548
Reduced machinery inventory	20.6	582	15.8	11.8	547
Rented more acres	20.4	583	15.5	13.1	549
Sought training for new vocation	14.0	583	10.7	17.0	551
Retire from farming	10.4	593	16.7	19.5	560
Started a new business (for farming)	11.2	587	10.3	15.0	553
Bought additional land	11.2	587	10.0	14.5	552
Used the future markets to hedge prices	9.7	579	13.4	12.7	547
Quit farming	8.2	592	13.3	25.8	561
Sold some land	7.3	587	5.6	10.6	549
Changed from cash rent to crop share	5.6	581	6.3	8.9	545
Transferred land back to lender	1.3	583	1.3	3.9	548

Table 9. Farm operators' report of participation in government programs and their opinions on how helpful the programs were

"There are a number of government programs and laws designed to assist farmers. Please indicate whether you have participated in them over the past five years and how much help they provided."

	Participated			Did Not Participate				Number of Respondents
	No Help	Some Help	A Lot of Help	Not Needed	Did Not Qualify	Not Available	Did Not Know About	
	Percent			Percent				
1988 Drought Assistance Act	5.7	39.3	25.7	19.0	9.6	0.0	0.7	562
Federal government commodity programs (e.g. Feed Grain, Dairy Support)	4.4	39.6	21.0	22.7	10.9	0.1	1.2	554
Loans from FmHA	8.1	4.7	7.7	65.3	12.5	0.8	0.9	539
Conservation reserve program (CRP)	6.2	13.4	6.0	54.2	16.9	0.4	3.0	532
Vocational retraining/ education program for self or family member	5.2	8.5	4.2	73.8	3.2	0.7	4.4	541
Unemployment benefits	4.7	3.9	2.1	76.1	10.6	1.2	1.4	544
Farmer/lender mediation service	8.7	2.9	1.7	74.1	4.7	0.5	7.4	538
Mental health counseling for yourself or family member	4.8	3.8	1.7	83.3	2.8	0.8	2.7	538
Federal all-risk crop insurance	8.9	10.0	1.1	63.4	5.2	1.4	9.9	537
Fuel Assistance	5.7	4.1	1.1	78.1	9.2	0.5	1.4	544
Chapter 12 (debt restructuring for farmers)	2.1	0.5	0.5	91.9	4.0	0.2	0.9	517
Job Partnership Training Act or other off-farm job search assistance program	6.0	2.5	0.4	79.8	3.1	0.8	7.3	541
Financial analysis or counseling by Extension Service	5.1	4.1	0.4	80.0	2.3	0.7	7.3	542
Chapter 11 bankruptcy (debt reorganization)	2.1	0.6	0.3	92.6	3.5	0.2	0.7	517
Income assistance (eg., AFDC, SSI)	5.0	2.0	0.3	78.7	10.0	0.4	3.7	544
Food stamps	5.3	1.4	0.1	84.1	8.0	0.3	0.8	541

Table 10. Farmers' opinions on their information and training needs to continue farming in the next five years

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"In order to continue farming in the next five years, I will need information/training on:"

	<u>Not Needed</u>	<u>Low Need</u>	<u>Moderate Need</u>	<u>High Need</u>	<u>Very High Need</u>	<u>Number of Respondents</u>
Reducing production costs through low-input farming methods	22.2	14.3	36.6	17.4	9.5	572
Using new technologies as they become available	21.7	13.9	39.4	18.5	6.5	569
Marketing skills	32.0	14.0	36.1	11.7	6.2	570
Available government assistance	33.9	18.3	28.4	13.7	5.7	567
Using appropriate conservation techniques	28.3	18.4	33.6	14.2	5.5	571
Using new machines and chemical inputs to increase my production	30.9	17.2	35.1	12.0	4.8	572
Diversification of farm operation by adopting new crops and livestock	35.3	17.4	30.2	12.8	4.3	570
Bookkeeping and financial systems	38.0	18.3	25.7	14.0	3.9	573
Processing farm products on farm before selling	54.3	21.3	15.0	6.6	2.8	568

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Table 11. Farm spouses' report on types of farm duties and changes in the amount of time spent on these duties

	Perform These Duties				Number of Respondents	Time on These Duties Has			Number of Respondents
	Always	Some times	Never	Not Done		In-creased	Stayed the Same	De-creased	
Done household tasks and/or child care	86.3	8.8	1.4	3.5	470	24.7	64.2	11.0	440
Bookkeeping and maintained records	62.2	22.2	13.4	2.2	470	24.6	66.5	8.8	438
Took care of a vegetable garden or animals for family consumption	53.1	31.7	9.3	5.9	476	12.1	66.5	21.4	429
Milked or cared for farm animals	38.9	38.3	15.6	7.2	471	18.7	50.5	30.8	432
Worked at an off-farm job	38.9	27.0	23.3	10.9	475	27.4	57.0	15.5	399
Run farm errands	34.6	58.8	4.9	1.7	467	17.3	64.1	18.6	438
Field work	15.6	56.8	20.5	7.1	476	9.9	57.2	32.9	444
Purchased major farm supplies and equipment	10.7	33.7	47.9	7.6	469	4.6	81.7	13.7	416
Supervised the farm work of others	10.5	38.4	36.9	14.1	469	8.2	74.6	17.1	397
Marketed farm products through wholesale buyers or directly to consumers	8.5	19.0	47.3	25.2	468	4.8	81.2	14.0	388

Table 12. Farm spouses' opinions on family decision-making behavior

"For each of the following decisions, please indicate whether you usually make the decision, your spouse/someone else makes the decision, or you make the decision together with your spouse/someone else."

	Usually myself	My husband or someone else	Myself and husband or someone else together	Decision has never come up	Number of Respondents
	----- Percent -----				
Buy major household appliances	15.1	9.9	73.3	1.7	478
Buy or sell land	2.7	16.9	55.6	24.8	479
Buy major farm equipment	5.0	38.3	51.2	5.5	478
Rent more or less land	3.2	30.2	40.7	25.9	474
Produce a crop or livestock	3.5	41.9	36.6	17.9	471
When to sell your agri- cultural products	5.7	48.6	34.5	11.2	475
Try a new agricultural practice	4.3	46.5	34.2	15.0	476



Table 13. Farm spouses' report on frequency of life pressures

"There are many pressures on farm families. How frequently do you experience the following pressures?"

	Almost <u>never</u>	Occasionally	Daily	Does not <u>apply</u>	<u>Number of Respondents</u>
	----- Percent -----				
Problems in balancing work and family responsibilities	16.6	50.2	29.0	4.3	474
Lacking control over weather and commodity prices	12.2	57.8	21.7	8.4	468
Indebtedness and debt-servicing problems	32.4	42.2	10.4	14.9	475
Adjusting to new government policies	25.4	56.9	5.4	12.3	468
Insufficient support from spouse in farm or family duties	55.1	30.4	5.4	9.1	474
Conflict with spouse	39.4	52.2	5.2	3.3	479
Conflict with children	39.4	52.2	5.2	3.3	479
No farm help or loss of help when needed	28.5	48.5	4.5	18.5	474
Difficulty with child care arrangements	31.8	17.0	2.0	49.2	473

Table 14. Coping strategies used by farm spouses

	Use a	Use quite	Use	Never	Number of Respondents
	great deal	a bit	somewhat	use	
	----- Percent -----				
Participate in church activities	24.2	22.3	35.7	17.8	479
Remind myself that for everything bad about farming, there is also something good	22.4	34.3	33.0	10.3	470
Put up with a lot as long as I make a living from farming	19.2	29.8	29.5	21.5	465
Make a plan of action and follow it	16.4	29.2	43.9	10.5	462
Try to keep my feelings to myself	15.6	17.9	47.1	19.4	467
Don't expect to get much income from farming	14.9	17.4	43.1	24.6	463
Notice people who have more difficulties in life than I do	14.6	34.6	44.3	6.6	472
Wish that the situation would go away or somehow be over with	13.9	11.6	41.7	32.8	468
Tell myself that success in farming is not the only important thing in life	13.8	26.4	45.1	14.7	470
Become more involved in activities outside the farm	11.3	22.9	48.6	17.2	478
Keep problems secret from others	11.0	11.2	42.9	34.8	469
Go on as if nothing is happening	10.3	20.4	37.2	32.1	467
Seek support from friends and/or relatives	5.2	17.9	43.9	33.0	464
Seek spiritual support from minister, priest, or other	4.7	7.7	32.1	55.5	466
Talk to someone who can do something concrete about the problem	4.0	9.2	41.6	45.2	469
Try to make myself feel better by eating, drinking, smoking, using medication, etc.	3.5	9.3	23.5	63.7	470
Refuse to think about it	3.0	9.0	41.2	46.7	468
Talk to a family counselor or other mental health professional	1.4	1.5	6.8	90.3	467

Table 15. Operator and farm spouse membership in farm and local organizations

"There are a number of farm and local organizations. Please indicate spouse and operator's activity in these organizations."

	Spouse			Number of Respondents	Operator			Number of Respondents
	Former Member	Never Member	Percent		Former Member	Never Member	Percent	
Any organization, such as National Farmers Organizations, Grange, Farm Bureau, National Farmers Union, Young Farmers and Farm Wives	28.2	11.5	60.3	462	36.5	16.2	47.3	461
Farm Supply Cooperative	24.0	3.7	72.3	448	36.8	6.7	56.5	434
Any commodity producers' associations, such as the American Dairy Association or National Wheat Producers Association	19.5	3.3	77.2	455	28.6	7.2	64.1	434
Marketing Cooperative	17.9	3.5	78.6	448	24.9	6.2	68.9	422
Local governing board, such as school board or town council	8.4	6.7	84.7	454	9.0	11.5	79.5	429
Any women's branches of general farm organizations, such as Farm Bureau Women	5.2	3.9	91.0	453	1.9	6.3	91.7	395
Any women's branches of commodity organizations, such as the Cattlewomen or the Wheathearts	1.9	0.1	97.9	450	1.3	0.3	98.4	401
Farm political action groups, such as a state Family Plan Movement or National Save the Family Farm Coalition	1.0	1.3	97.7	452	2.0	0.9	97.1	416
Women's farm organizations, such as Women for Agriculture, American Agri-Women, or Women Involved in Farm Economics	2.0	1.9	96.1	455	0.4	0.8	98.9	399

## Appendix A. Weighting Scheme

Because of the high nonresponse rate for this survey (61 percent of the farm operators) it was possible that our respondents did not reflect the true population of farm operators in Wisconsin. To improve the representativeness of our sample, we weighted the sample based on two salient characteristics of the population. The sample respondents have been weighted to reflect the distribution of all farms in the population by "gross sales of farm products" and "age of operator," based on the population statistics from the 1987 Census of Agriculture. The weights were calculated as follows:

$$\text{Weight for Observation in "Gross Sales-Age" Category } i = \frac{\text{Percent of the Population in "Gross Sales-Age" Category } i}{\text{Percent of Sample in "Gross Sales-Age" Category } i}$$

The specific weights assigned to each observation in a gross sales-age category are given in Appendix Table 1.

Appendix Table 1. Weights assigned to farm operators and associated spouses.

Age of Operator	Gross Sales of Farm Products Categories		
	<\$10,000	\$10,000-99,999	>\$100,000
Age ≤ 34	11.2	1.3	0.9
35-44	2.6	1.0	0.6
45-54	1.6	0.8	0.6
55-64	1.6	0.8	1.0
≥ 65 years	1.1	0.7	1.3

The weights indicate that farms with gross sales of farm products <\$10,000 of all ages were undersurveyed in the sense that their proportion in the population is much higher than their proportion in our sample. For farms reporting gross sales >\$100,000, older farmers were slightly under-represented in our sample. All other gross sales-age categories were over-represented in our sample relative to the population.

Appendix Table 2. Comparison on weighted and unweighted personal characteristics of operators and spouses.

Characteristics	Sample of Operators		Sample of Spouses	
	Unweighted	Weighted	Unweighted	Weighted
<b>Years of Age</b>				
Under 25 years	0.3	0.4	2.8	3.3
25-34 years	10.5	15.2	15.2	15.4
35-44 years	20.5	21.5	21.1	21.2
45-54 years	25.0	22.0	27.6	26.9
55-64 years	25.0	24.0	24.0	23.9
65+ years	<u>18.7</u>	<u>16.9</u>	<u>9.1</u>	<u>9.3</u>
	100%	100%	100%	100%
<b>Years of Education</b>				
1-8 years	17.3	17.3	21.4	11.3
9-12 years	56.8	56.8	49.6	54.1
13-16 years	21.3	21.3	25.9	31.0
17+ years	<u>4.6</u>	<u>4.6</u>	<u>3.1</u>	<u>3.6</u>
	100%	100%	100%	100%
<b>Net Family Income From All Sources</b>				
Loss	6.4	6.9	DNA	
\$1--\$9,999	22.0	22.7	DNA	
\$10,000--19,999	25.0	24.5	DNA	
\$20,000--\$29,999	20.8	19.4	DNA	
\$30,000--\$39,999	11.3	10.9	DNA	
\$40,000--\$49,999	6.8	7.7	DNA	
\$50,000--\$59,999	3.5	3.7	DNA	
\$60,000--\$69,999	1.6	1.7	DNA	
Over \$70,000	<u>2.6</u>	<u>2.5</u>	<u>DNA</u>	
	100%	100%	100%	

Mean age of farm operator was 50.3 years from the Census of Agriculture and 50.4 years from our weighted survey respondents.

As indicated in Table 2, the weighting scheme had little effect on the distribution by age, education or net family income. In addition, it appears that our sample (weighted or unweighted) distributed by age, education and net family income adequately represents the population as described in the 1987 Census of Agriculture.

DNA = Does Not Apply.

Appendix Table 3. Comparison of weighted and unweighted respondents' farm size characteristics to characteristics of total farm population in Wisconsin

Characteristic	Sample of Operators			Farm Population <sup>a/</sup>	
	Number	Percent	Weighted Percent	Number	Percent
<b>Farm Size in Acres</b>					
1--9 acres	62	10.0	6.1	4,012	5.3
10--49 acres	32	5.1	4.9	8,778	11.7
50--179 acres	268	43.0	43.2	27,498	36.6
180--499 acres	237	38.1	41.2	28,828	38.4
500--999 acres	22	3.6	4.4	4,923	6.5
1,000+ acres	<u>1</u>	<u>0.2</u>	<u>0.2</u>	<u>1,092</u>	<u>1.5</u>
	622	100.0%	100.0%	75,131	100.0%
<b>Gross Sales of Farm Products</b>					
Less than \$10,000	113	18.1	31.1	23,382	31.1
\$10,000--\$99,999	341	54.9	48.5	36,392	48.5
\$100,000 or more	<u>168</u>	<u>27.0</u>	<u>20.4</u>	<u>15,357</u>	<u>20.4</u>
	622	100%	100.0%	75,131	100%

Source: 1987 Census of Agriculture; Volume 1 Geographic Area Series; Part 49, Wisconsin State and County Data.

It would appear that our sample (weighted or unweighted) roughly reflects the population with regard to size of farm if farm size is measured in acres. There is a large discrepancy, however, between the distribution of the farm population across gross sales categories and the distribution of our unweighted sample by gross sales. The weighted sample will very closely resemble the farm population in this category because the weights were based, in part, on the value of gross sales.